WHAT IS CLAIM IS:

1. A method of treating a critically ill patient and/or a critically ill polyneuropathy (CIPNP)-patient and/or a potential CIPNP-patient comprising administering a blood glucose regulator to a critically ill patient, a CIPNP-patient, and/or a potential CIPNP-patient.

2. A method of treating a patient suffering from systemic inflammatory response syndrome (SIRS) or at risk for SIRS, comprising administering a blood glucose regulator to a patient suffering from SIRS or at risk for developing SIRS.

3. A method of treating a patient suffering from or at risk from sepsis, comprising administering a blood glucose regulator to a patient suffering from or at risk from sepsis.

4. A method of treating a patient suffering from or at risk of CIPNP, multiple organ failure, need for mechanical ventilatory support, renal replacement therapy, disturbed kidney function parameters, hyperbilirubinemia, blood stream infections, inflammations and/or inflammatory responses, need for antibiotics, red cell transfusion, stress induced hyperglycaemia, risk of repetitive positive EMGs, cholestasis, or a condition of insulin resistance leading to hyperinsulinimea in combination with hyperglycaemia, comprising treating such a patient with a blood glucose regulator.

5. The method of claim 5, wherein the blood glucose regulator is insulin, active insulin derivatives, insulin analogues, compounds that stimulate signal transduction mediated by an insulin receptor type tyrosine kinase in a cell, certain protein-tyrosine phosphatases (PTP's), other type II antidiabetica, and other biologically active substances having insulin releasing action, preferably insulin.

6. The method of claim 5, wherein the blood glucose regulator is a blood glucose regulator which is not to be administered orally.

7. The method of claim 5, wherein the blood glucose regulator is administered to maintain blood glucose levels within a range between 60- 130 mg/dL.

8. The method of claim 7, wherein the blood glucose level is maintained between 80-110 mg/dL.

9. The method of claim 5, wherein the blood glucose level is maintained for 8 hours or more.

10. The method of claim 9, wherein blood glucose level is maintained for 24 hours or more.

11. The method of claim 10, wherein blood glucose level is maintained for 4 days or more.

12. The method of claim 5, wherein the patient is a mammal.

13. The method of claim 12, wherein the patient is a human.

14. The method of claim 13, wherein the patient is non-diabetic.

15. The method of claim 5, wherein the patient in need of cardiac surgery, cerebral surgery, thoracic surgery, abdominal surgery, vascular surgery, or transplantation, or a patient suffering from neurological diseases, cerebral trauma, respiratory insufficiency, abdominal peritonitis, multiple trauma, severe burns, or CIPNP.

16. Advertising media and material and information media and material having or giving information about the indications and utilities of a blood glucose regulator.

17. The advertising media of claim 16, wherein the blood glucose regulator is insulin.

18. A method of selling a blood glucose regulator, preferably insulin, by giving information of about the indications and utilities of said blood glucose regulator.

19. A method for the treatment of Critical Illness Polyneuropathy in mammals, wherein said critical ill individual receives an effective amount of a compound to keep the blood glucose levels between about 80 and about 110 mg/dL.

20. The method of claim 19, wherein the amount is about 4.6 - 6.1 mmol/L).

21. The method of claim 20, whereby said compound is selected from a group of compounds comprising insulin, its active derivatives and the physiologically tolerated salts of these insulin derivatives or of a group of biologically active substances having insulin releasing action or of a group of compounds that stimulate signal transduction mediated by an insulin receptor type tyrosine kinase in a cell.